

Environmental Audit Committee inquiry into 'Measuring Well-being and Sustainable Development'

Evidence from Clean Air in London

29 October 2012

Introduction

1. Clean Air in London (CAL) submits this memorandum to the Environment Audit Committee's (EAC's) inquiry 'Measuring Well-being and Sustainable Development' which opened on 25 September and closes on 29 October 2012. Thank you for inviting submissions. The EAC's announcement of the inquiry can be seen at:

<http://www.parliament.uk/business/committees/committees-a-z/commons-select/environmental-audit-committee/news/new-inquiry-measuring-well-being-and-sustainable-development/>

2. CAL's mission is to achieve urgently and sustainably at least World Health Organisation (WHO) recommended standards of air quality throughout London. CAL is a not for profit company limited by guarantee, registered in England and Wales, with number 7413769. It is responsible for the Campaign for Clean Air in London. Further details about CAL can be found at www.cleanairinlondon.org.
3. CAL is independent of any government funding, has cross-party support and a large number of supporters, both individuals in London and organisations. CAL provides a channel for both public concern and expert opinion on air pollution. CAL has chosen to reply to this inquiry rather than respond to the Department for Environment and Rural Affairs' (Defra's) recent consultations on sustainable development indicators (SDI) and environmental key performance indicators (KPI) for business.

<http://www.defra.gov.uk/consult/2012/07/24/sus-dev-indicators/>

<http://www.defra.gov.uk/consult/2012/07/25/environmental-kpi/>

4. CAL is keen to give oral evidence to the EAC if invited to do so.

Summary

5. The new structure for sustainable development indicators (SDI), as outlined in the recent Defra consultation, relegates air quality to a second tier 'supplementary indicator' status. Defra says its tier 1 'headline indicators' 'are high level outcome measures and capture priority issues for making economic, environmental and social progress for this and future generations'. The proposed relegation of air quality to supplementary indicator status is unacceptable.
6. Ambient or outdoor air pollution comprises particles and gases. The particles, which can comprise anything from tiny droplets to diesel soot and tyre and brakewear, are called 'particulate matter' and classified by their aerodynamic diameter in microns (one-millionth of a metre (μm) which is about one-hundredth of the thickness of a human hair) e.g. $\text{PM}_{2.5}$ and PM_{10} . The gases, which can coalesce and become particles, are mainly nitrogen dioxide (NO_2), ozone (O_3) and sulphur dioxide (SO_2).

7. Previous EAC inquiries¹ have found that long-term exposure to PM_{2.5} was responsible for 29,000 attributable deaths in the UK in 2008 and is second only to smoking in its impact on public health. With such enormous impacts, air quality must be a 'headline indicator' rather than a 'supplementary indicator'. Air quality is currently one of the 68 indicators used by Defra.
8. Defra submitted its latest estimates for the UK's long-term exposure to PM_{2.5} to the European Commission on 28 September 2012. These are: 12.5 micrograms per cubic metre (µg/m³) (2009); 13.0 µg/m³ (2010) and 13.5 µg/m³ (2011) with an average of 13.0 µg/m³ i.e. a significant deterioration each year of this important public health metric. See tab 28 of file 1:

<http://cdr.eionet.europa.eu/gb/eu/annualair/envugvtza>

At an average of exactly 13.0 µg/m³ (and less than 18.0 µg/m³) the UK is required by Directive 2008/50/EC to reduce population weighted concentrations of PM_{2.5} by 15% by 2020. At 12.9 µg/m³ (or less) the requirement would be 10%.

9. The air quality indicator proposed by Defra does not fit with the Government's legal duties on air quality. Where legal duties exist it is essential that they are mirrored by the sustainable development indicators, otherwise the indicators are likely to be overshadowed by the legal duties and have little impact on shaping and controlling policy across Government departments. The air quality indicator should be changed to the number of people (at their residential locations) exposed to air pollution that exceeds EU limit/target values for such pollutants with an area based metric for exceedances in the natural environment.
10. In addition to the consultation on SDI Defra has also been running a parallel consultation on environmental key performance indicators (KPI) for businesses. For air quality the proposed KPIs are emissions of nitrogen oxides (NOx), sulphur oxides (SOx) and particulate matter. CAL strongly supports the choice of these proposed indicators for business, as they align well with the UK's legal responsibilities e.g. National Emissions Ceilings Directive. In other words, Defra is proposing (rightly) to upgrade the key indicators of air pollution for individual businesses at the same time it is (wrongly) downgrading those for monitoring the Government's progress.
11. Under the Health and Social Care Act 2012, the Public Health Outcomes Framework includes indicator 3.1 on 'Air pollution'. This indicator is the number of deaths attributable to long-term exposure to PM_{2.5}. See:

http://cleanairinlondon.org/wp-content/uploads/CAL-208-DH_Summary_technical_specifications_of_public_health_indicators_Jan_2012.pdf

The Committee on the Medical Effects of Air Pollution (COMEAP) recently published advice on the calculation of this and related metrics at the local level. See:

<http://comeap.org.uk/documents/statements/156-mortality-burden-of-particulate-air-pollution.html>

12. Many local authorities are already considering their Health and Wellbeing Strategies before indicator 3.1 in the Public Health Outcomes Framework has been provided to local authorities e.g. they are using Regional Public Health Outcomes Frameworks published in June 2012 that omit this crucial information. See:

<http://cleanairinlondon.org/wp-content/uploads/CAL-208-Westminster-PHOF.pdf>

¹ <http://www.publications.parliament.uk/pa/cm200910/cmselect/cmenvaud/229/22902.htm>,
<http://www.publications.parliament.uk/pa/cm201012/cmselect/cmenvaud/1024/102405.htm#a3>

This is a serious omission given that the ‘Air pollution’ indicator is likely to identify the biggest public health risk in many or most areas after smoking, particularly London. The Mayor of London published a health study in 2010 that provided such numbers by ward for 2008. It would be ridiculous if Health and Wellbeing Strategies are finalised for the period to 2016 before those responsible for them are aware that air pollution is their second biggest risk to manage.

13. CAL recommends:

- i. Defra align its SDI, KPI for business and business plan with the UK’s legal responsibilities for air pollution which are aligned to public health metrics;
- ii. air quality must be included in the top tier of such indicators and plans as the biggest public health risk after smoking;
- iii. the air quality indicator should be changed to the number of people (at their residential locations) exposed to air pollution that exceeds EU limit/target values for such pollutants. It should be moved to the environment section of the indicators. Supplementary indicators should be provided for individual air pollutants and include exceedances in the natural environment; and
- iv. it is vital Directors of Public Health and Health and Wellbeing Boards: assess air pollution in their Joint Strategic Needs Assessment; and prioritise measures to address air pollution in their Health and Wellbeing Strategy.

Air quality relegated to ‘supplementary indicator’ status

14. The enormous health impacts of poor air quality have been explored through the EAC’s previous ‘Air Quality’ and ‘Air Quality: A Follow up Report’ inquiries. Poor air quality is estimated to have been responsible for 29,000 attributable deaths in 2008 in the UK. Poor air quality has an impact on public health that is second only to (direct) smoking. The impact of just one pollutant compared to two other (higher profile) public health risks is shown in the table below²:

	Reduction in PM _{2.5}	Elimination of road traffic accidents	Elimination of passive smoking
Expected gain in life expectancy	7-8 months	1-3 months	2-3 months
Estimated equivalent gain in life years in England and Wales from 2005-2110 for the whole population (including people born during that time)	39,058,000	8,126,000	13,194,000

15. In view of these huge public health impacts, the proposed relegation of air quality to supplementary indicator status is unacceptable. CAL believes that the proposed two tier system of headline and supplementary indicators, as proposed by Defra, will mean attention and action inevitably focus on the headline indicators, to the detriment of the supplementary indicators. It is essential that air pollution is addressed urgently across Government and indicators and targets must reflect the UK’s legal responsibilities and need to communicate the health and other risks.

² Source - Department of Health cited in EAC ‘Air Quality’ report www.publications.parliament.uk/pa/cm200910/cmselect/cmenvaud/229/22905.htm#a5

16. In addition to its impacts on human health, air pollution also affects the natural environment. Impacts include loss of biodiversity, reduced crop yields and a contribution to climate change, which have again been explored in the EAC's 'Air Quality' inquiry. Placing air quality in the 'society' set of indicators ignores these impacts. CAL recommends that the air quality indicator should be placed in the environment section of the headline indicators to reflect its wide ranging impacts.

Design of the air quality indicator

17. The design of Defra's proposed air quality indicator is 'days when air pollution is moderate or higher in the UK'. The indicator is based upon the UK air quality index ('the index') produced by Defra. The index provides a picture of air quality in the UK, but only has loose links with the UK's legal responsibilities for air quality. It does not provide an adequate picture of the UK's progress in reducing concentrations of individual pollutants to meet legally binding targets.
18. The UK has legal responsibilities for air quality through Directive 2008/50/EC on ambient air and cleaner air for Europe (Directive 2008/50/EC). Directive 2008/50/EC sets limit and target values for pollutants including NO₂, particulate matter and SO₂ that must be achieved by fixed deadlines. Limit values are legally binding upon the UK. These legal duties are the main driver of UK air quality policy; they must be reflected by SDI if the indicators are to help inform and shape policy across Government.
19. CAL recommends that the indicator for air quality should be 'number of people living in areas that exceed European air quality standards' (based on residential locations). A headline indicator should include people in areas that exceed standards for any one pollutant; additional sub-indicators should also be produced for individual pollutants i.e. people in areas exceeding target and limit values for NO₂, particulate matter (PM₁₀ and PM_{2.5}), SO₂ and poly-aromatic hydrocarbons.

Defra's approach to air quality

20. Defra consistently places a low priority on air quality, which has knock-on effects across Government. Despite the enormous impacts of air pollution, as illustrated in paragraph 7, air quality is not included in Defra's business plan³. CAL notes that on the day that the Defra consultation on SDI opened (24 July) air pollution concentrations reached levels that should have triggered the release of a smog warning before a Pollution Episode Warning was finally issued on 25 July after the UK had breached an information threshold for O₃ under UK and EU law at a school in North Kensington in London. CAL believes that Defra's low priority for air quality is demonstrated again by its proposed approach to SDI.
21. CAL notes that Defra launched a consultation on environmental KPI for businesses on 25 July in parallel with its consultation on SDI for the UK as a whole. CAL strongly supports the proposed KPIs for air quality in the KPI consultation, which encourage businesses to 'aim to calculate and report the annual emissions of NO_x (tonnes per annum), SO_x (tonnes per annum) and PMs (tonnes per annum)'. These KPIs link in directly with the UK's legal responsibilities for these pollutants, such as the National Emissions Ceilings Directive. Currently, it seems Defra wishes to pass its responsibilities to others and hide its own.

Population exposed to air pollution exceeding limit values, targets or objectives

22. Defra submitted its latest estimates for the UK's long-term exposure to PM_{2.5} to the European Commission on 28 September 2012. These are: 12.5 micrograms per cubic metre (µg/m³) (2009);

³ See - www.number10.gov.uk/wp-content/uploads/2012/05/DEFRA-2012-Business-Plan.pdf

13.0 $\mu\text{g}/\text{m}^3$ (2010) and 13.5 $\mu\text{g}/\text{m}^3$ (2011) with an average of 13.0 $\mu\text{g}/\text{m}^3$ i.e. a significant deterioration each year of this important public health metric. See tab 28 of file 1:

<http://cdr.eionet.europa.eu/gb/eu/annualair/envugvtza>

At an average of exactly 13.0 $\mu\text{g}/\text{m}^3$ (and less than 18.0 $\mu\text{g}/\text{m}^3$) the UK is required by Directive 2008/50/EC to reduce population weighted concentrations of $\text{PM}_{2.5}$ by 15% by 2020. At 12.9 $\mu\text{g}/\text{m}^3$ (or less) the requirement would be 10%.

23. In the same submission to the European Commission, Defra admitted (tab 2 of files 1 and 2) ‘Population exposed is population in background locations, no attempt has been made to assess population exposure at the roadside’ despite the latter being a requirement of Council Decision 2004/461/EC. Even excluding ‘roadside exposure’, Defra estimates 475,570 people in the UK (including 440,439 in London) were exposed to concentrations of NO_2 exceeding the limit value(s) for NO_2 (see also tab 19 of file 2). Target values were exceeded for benzo(a)pyrene (291,332 people affected), nickel (3,251 people affected) and ozone (millions of people affected) in 2011.

Health and Wellbeing Boards

24. It is vital Directors of Public Health and Health and Wellbeing Boards: assess air pollution in their Joint Strategic Needs Assessment; and prioritise measures to address air pollution in their Health and Wellbeing Strategy.

http://cleanairinlondon.org/wp-content/uploads/CAL-208-DH_Summary_technical_specifications_of_public_health_indicators_Jan_2012.pdf

25. Many local authorities are already considering their Health and Wellbeing Strategies before indicator 3.1 in the Public Health Outcomes Framework has been provided to local authorities e.g. they are using Regional Public Health Outcomes Frameworks published in June 2012 that omit this crucial information. See:

<http://cleanairinlondon.org/wp-content/uploads/CAL-208-Westminster-PHOF.pdf>

This is a serious omission given that the ‘Air pollution’ indicator is likely to identify the biggest public health risk in many or most areas after smoking, particularly London. The Mayor of London published a health study in 2010 that provided such numbers by ward in 2008. It would be ridiculous if Health and Wellbeing Strategies are finalised for the period to 2016 before those responsible for them are aware that air pollution is their second biggest risk to manage.

Recommendations

26. CAL recommends:

- v. Defra align its SDI, KPI for business and business plan with the UK’s legal responsibilities for air pollution which are aligned, in turn, with public health metrics;
- vi. air quality must be included in the top tier of such indicators and plans as the biggest public health risk after smoking;
- vii. the air quality indicator should be changed to the number of people (at their residential locations) exposed to air pollution that exceeds EU limit/target values for such pollutants. It should be moved to the environment section of the indicators. Supplementary indicators

should be provided for individual air pollutants and include exceedances in the natural environment; and

- viii. it is vital Directors of Public Health and Health and Wellbeing Boards: assess air pollution in their Joint Strategic Needs Assessment; and prioritise measures to address air pollution in their Health and Wellbeing Strategy.